
SOLID WASTE DISPOSAL

6-01.1.0	PURPOSE
6-01.2.0	DEFINITIONS
6-01.3.0	APPLICABILITY
6-01.4.0	ALL DEVELOPMENT
6-01.5.0	MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT
6-01.6.0	SINGLE-FAMILY RESIDENTIAL DEVELOPMENT
6-01.7.0	SPECIAL SERVICES
6-01.8.0	LIST OF EXHIBITS AND FIGURES

6-01.0.0 SOLID WASTE DISPOSAL.

6-01.1.0 PURPOSE. To respond to the need for safe and efficient systems of refuse and recycling storage and collection, the following Solid Waste Disposal Standards have been established to:

- 1.1 Provide refuse and recycling infrastructure standards for all types of development.
- 1.2 Enhance the appearance of the City through implementation of these Development Standards for the collection and storage of refuse and recycling materials.
- 1.3 Create provisions for the sanitary storage and collection of all refuse and recycling materials.
- 1.4 Establish dimensional requirements for container enclosures, and access and maneuvering areas for collection vehicles.
- 1.5 To increase recycling of materials generated by City residents and businesses.

6-01.2.0 DEFINITIONS. Definitions for words used in this Standard are found below, in the Tucson Code Chapter 15, in the Development Standards Glossary, or in Sec. 6.2.0 of the Tucson Land Use Code (LUC).

- 2.1 APC Automated Plastic Containers.
- 2.2 ASL Automated Side Loading service vehicle.

6-01.3.0 APPLICABILITY. These Standards apply to all new construction and new service within the City of Tucson including the remodeling of existing sites as well as newly established businesses.

6-01.4.0 ALL DEVELOPMENT.

4.1 General.

- A. The requirements of this Standard shall be shown on the plan either graphically or with notes.

- B. Include a note specifying the anticipated method of collection and collection frequency.
- C. All refuse and recycling collection and storage areas will be screened from public view, from adjacent developments, and from the public right-of-way.
- D. Refuse and recycling enclosure(s) location shall comply with any rezoning requirements.
- E. APC's are available for volumes up to 180 gallons per week. Metal container service is required when the volume exceeds 180 gallons per week.
- F. Refuse and recycling enclosures built into property walls must comply with horizontal and vertical clearances as stated in this development standard.
- G. The property owner must enter into a written agreement with the City allowing City vehicles access onto the property (See **Exhibit I**).
- H. Since private streets and site access PAAL's are not required to be constructed to City of Tucson structural standards for public streets, the City is relieved of any responsibility for structural damage to the private access street or PAAL caused by normal procedures of refuse and recycling collection. The property owner/developer must acknowledge responsibility and grant access in recorded covenants for refuse/recycle services. (See **Exhibit I**)
- I. Properties without sufficient space for on-site collection and storage of refuse and recycling materials shall be evaluated for service on a case by case basis. Examples of alternate enclosures for metal containers are shown in **Figure 1**.
- J. Existing use of adjacent properties surrounding the proposed development, i.e., vacant land, residences, shopping centers, commercial buildings, alleys, easements, drainage, etc., shall be shown on the plan.
- K. Use of the Automated Side Loading (ASL) system for multi-family, commercial, or industrial development requires prior approval of the Environmental Services Department.
- L. Each residential development/establishment, as defined in Tucson Code Chapter 15, requiring on site solid waste collection services must contact Environmental Services Department to establish services prior to resident occupancy.

4.2 Modifications.

- A. Where, in the opinion of the Community Design Review Committee (CDRC) and Environmental Services, there exist extraordinary conditions of topography, land ownership, adjacent development, historic district consideration, or other circumstances not provided for in these Standards, the CDRC and Environmental Services may modify these Standards as deemed appropriate in the public interest.
- B. In modifying these Standards or requirements of these provisions, the CDRC may make such additional requirements as appear necessary, to secure substantially the

objectives of the Standards or requirements which are modified, providing the modifications do not conflict with any other ordinance or regulation. All items not specifically covered by these Standards will be judged on a case-by-case basis by the CDRC and Environmental Services without setting precedent.

4.3 Fees.

- A. Current C.O.T. fee schedules is available in the Environmental Services office upon request.
- B. Fees for solid waste/recycling collection and disposal as established by the Mayor and Council are based upon the size of the containers, type of containers and the frequency of collection.

6-01.5.0 MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT.

5.1 General.

- A. Storage areas for APC's shall be screened from view of adjacent properties and from public right-of-way.
- B. New projects (including mobile home parks) consisting of three (3) or more dwelling units shall provide centralized on-site refuse and recycling collection with service access from within the tract. (Utilization of individual containers (APC's) for three (3) or more new dwelling units requires approval by Environmental Services on a case by case evaluation of the proposed point of collection for the projects. Lot splits for single residences that do not have street frontage and with three or more new dwelling units shall comply with this section.)
- C. All metal dumpsters require enclosures with gates and shall be stored in their enclosure when not being serviced.
- D. The locations of walls, fences, hedges, or landscaped buffer areas that are designed to reduce noise and enhance the aesthetics at the point of the refuse and recycling collection shall be shown on the plan.
- E. Metal containers shall conform to industry standards and shall be leak proof..
- F. Each development/bussiness requiring on-site solid waste collection service shall comply with providing a minimum of two (2) single or one (1) double wide enclosure/s to accommodate for both refuse and recycling collection. Additional enclosures may be required based on the nature and volume of waste generated by the development/business in comparison with current standards and practices.
- G. Where a development is intending to provide centralized storage and collection to serve multiple buildings, tenants, or businesses a general note must be included within the plan stating " A single property owner, property management company, or association will be responsible for the management and maintenance of the solid waste collection services and storage area/s for all development/business occupants."

5.2 Enclosure Specifications.

- A. Enclosure walls shall be masonry constructed as shown in **Figure 2**.
- B. Vertical steel pipes (bollards) are required within the enclosure as wall protection. The inside edge of the bollard shall be a minimum of one (1) foot inside the inside surface of the rear and side walls of the enclosure to prevent the container from damaging the walls of the enclosure. (See **Figure 3**)
- C. The enclosure shall have a minimum ten (10) foot by ten (10) foot unobstructed interior space per container within the bollards. (See **Figure 3**)
- D. Enclosures are to have opaque gates with latches to prevent unauthorized access and to visually screen the container and gates are to be mounted to a post separate from enclosure wall/s.
- E. Enclosure gates should be painted to match or compliment the enclosure walls.
- F. Enclosure and gates must have a minimum unobstructed opening of twelve (12) feet. (See **Figure 3**)
- G. Enclosure gates must be securable in both the closed and open positions. The open position shall be a minimum of twelve (12) feet wide. (See **Figure 3**)
- H. A ten (10) foot by ten (10) foot concrete pad with a maximum two (2) percent grade shall be installed in front of the enclosure to reduce pavement damage from service operation.
- I. The enclosure base shall be five (5) inch thick concrete slab at 3000 psi with metal mesh reinforcement .

5.3 Stationary Compactor Specifications. Stationary front load compactor units may be utilized with two (2) to eight (8) cubic yard containers and rolloff units up to forty (40) cubic yards. Consultation with Environmental Services is recommended to determine specific container size, placement, availability, and design.

- A. Stationary compactor units shall be screened from adjacent properties and public right-of-way. Enclosure walls shall be masonry constructed and a minimum of eight (8) feet high as shown in **Figure 2**.
- B. Stationary roll-off compactor unit shall be placed on a pad of sufficient width to provide a two (2) foot clear area on each side of the unit. The overall length of the pad must be five (5) feet greater than the combined length of the compactor and the receiving container. Lengths of the receiving containers vary depending on the container's capacity. Consultation with Environmental Services is recommended to determine the exact dimensions.
- C. The service area pad should be six (6) inch thick concrete slab at 3000 psi with metal mesh reinforcement (per a professional engineer's design) where the container rollers rest on the concrete.

- D. The pad shall be designed to retain liquids resulting from containers seepage, from spills during loading and downloading, and from any fluids resulting from equipment malfunctions. (No liquids are allowed to runoff the collection pad.)
- E. An electrical disconnect switch for 220-440 (60 amps, 3 phase) shall be installed within five (5) feet of the compactor. (Equipment specifications will be required to be verified for electrical voltage requirements.)

5.4 Access and Maneuvering Standards.

- A. Service access shall be from within the development.
- B. A minimum safe access and operational area of fourteen (14) feet by forty (40), with a minimum vertical clearance of twenty-five (25) feet, shall be provided in front of each enclosure. If the enclosure is designed for more than one container, a safe access and operational area shall be provided for each container. (See **Figure 1, 4, and 5**)
- C. A minimum vertical clearance of twenty-five (25) feet, free of any overhead obstructions (wires, branches, etc.), shall be provided above the enclosure/service area.
- D. An adequate and safe ingress/egress is required for the collection vehicle in each new project. On-site turnarounds for service vehicles are shown in **Figure 6 and 7**.
- E. The containers/enclosures shall be positioned so as to permit the collection vehicle to collect refuse and recycle materials without impeding the continuous flow of traffic within the development.
- F. Solid waste storage areas shall be placed so that the collection vehicle does not have to back into the public right-of-way or into moving traffic on or off the premises.
- G. Minimum turning radius for access to and from the collection and storage area shall be 36' for the inside rear wheels and 50' for the outside front bumper. (See **Figure 7**). Require a minimum three (3) ft clear area between the collection vehicle and any structure or parking stall/s throughout maneuvering/turning radius.
- H. The maximum back-up distance for the collection vehicle shall be eighty (80) feet measured from the front of the collection vehicle.
- I. Subject to Environmental Services approval, when the width and depth of the property to be developed is insufficient to provide service access from within the development, the enclosures may be located such that service access is from the adjacent public right-of-way with a forty-five (45) or thirty (30) degree angle of approach that allows service by the vehicle without the collection vehicle pulling completely off the public right-of-way. (Note: Off street service is not permitted from arterial or collector streets.) (See **Figure 1 and 4**)
- J. The service vehicle shall be perpendicular to the enclosure ten (10) feet from the front of the enclosure.

- K. Private streets must conform to Street Development Standard 3-01.0 to provide adequate access for the service vehicle and be approved by Development Services review processes.

5.5 Location Standards.

- A. Collection and storage areas for refuse and recycling materials shall be located on-site and not exceed a distance of one hundred (100) feet for user access.
- B. The containers and enclosures must be placed a minimum of twenty (20) feet, or an adequate distance, from adjoining residential and commercial uses to prevent the impact of odor, flies and litter to those adjoining uses.
- C. Containers shall not be stored on any public right-of-way, bike lane, sidewalk or other public access use.
- D. Enclosures shall not be placed for storage or constructed for use on any public right-of-way, bike lane, sidewalk or other public access use.
- E. Containers and enclosures shall not obstruct sight visibility lines.
- F. Containers and enclosures shall not obstruct or block drainage.
- G. Containers and enclosures shall be placed in accordance with Fire Department Standards with regard to access and operational use of the fire hydrants.

5.6 Operational Standards.

- A. The property owner shall be responsible for keeping the collection and storage areas free from vegetation and other obstructions.
- B. Enclosures shall not be used to store other equipment, bins, or supplies including grease drums or liquid storage containers.
- C. The containers when stored will be screened from view of adjacent properties and from public right-of-way
- D. Service frequency may be determined in cooperation with the service company and shall be provided at least one (1) time each week at a minimum in accordance with a Service Agreement. Additional service up to six (6) times per week may be required depending on the nature and volume of solid waste generated by the establishment.

6-01.6.0 SINGLE-FAMILY RESIDENTIAL DEVELOPMENT.

6.1 General.

- A. Curbside service in dedicated right of way or a parking area access lane (PAAL) using Automated Plastic Containers (APC) and the Automated Side Loading (ALS) system is preferred for Single Family and Duplex Developments.

- B. New Single Family and Duplex Developments including mobile homes on individual lots fronting any major street (arterial or collector) will provide a frontage road, or on-site facilities for refuse and recycling collection.
- C. 300-gallon APC refuse service is based on three (3) residences per container. Service availability subject to Environmental Services approval.

6.2 Specifications.

- A. The current ASL arm has an at-rest span of 8'-9". (See **Figure 8**)
- B. The ASL vehicle servicing containers of 90-gallons or less in size cannot be closer than two (2) feet from the container. (The arm will not secure the container if it is closer than two (2) feet.) (See **Figure 8**)
- C. A single 90-gallon or less APC requires a four (4) foot by eight and one-half (8½) foot clear area that is level and free of vegetation and other obstructions. For each additional container an additional five and one-half (5½) feet is required. (See **Figure 8**)
- D. A single 300-gallon APC requires a six (6) foot by ten (10) foot clear area that is level and free of vegetation and other obstructions. For each additional container seven (7) feet more width is required. (See **Figure 9**)

6.3 Access and Maneuvering Standards.

- A. The collection point shall be unobstructed by any other improvements such as mailboxes, light poles, fire hydrants, fencing, street signs, or landscaping.
- B. Alley access requires prior approval by Environmental Services. Alley shall have a minimum twenty (20) foot wide cross section, maintained with a twelve (12) foot wide clear travel lane. (Note: Alley service maybe discontinued at the discretion of Environmental Services as the collection operations change.)
- C. A twenty-five (25) foot minimum height clearance, free of any overhead obstructions (wires, branches, etc.), will be provided above the collection area. (The alley travel lane must have a minimum of fifteen (15) foot overhead clearance.)

6.4 Location Standards.

- A. The standard collection point will be behind the curb in front of the premises in accordance with the Development Standards contained herein.
- B. The collection point shall be located outside the driveway space.
- C. Where sidewalks exist, APC's are to be placed in the buffer area between the curb and sidewalk. Placement shall be so as to not obstruct sidewalk traffic or bike lanes. (Where sidewalk exist adjacent to the curb a clear walkway area of three (3) feet will be provided for sidewalk traffic when the APC's are placed for service.)

- D. Automated Plastic Containers (APC's) are permitted to remain adjacent to the street or behind the curb only on scheduled collection days.
- E. Permanent enclosures on the curb or sidewalk or within public right-of-way are prohibited. Any storage container enclosures for the APC's must be within the subject premise or property and will be designed and specified by the architect/engineer.
- F. Alley service may only be approved where curb collection is not a feasible option
- G. The service area cannot be greater than six (6) feet from the edge of the street or (if serviced from an alley) travel lane of the alley
- H. The APC's, when stored, will be screened from view of adjacent properties and public right-of-way, and will be placed at an adequate distance from adjoining properties to prevent health-related impacts (odor, flies, etc.) to those properties.
- I. For residential collection that cannot be directly placed for collection in front of the residence, specific instructions on how and where the refuse/recycling containers will be collected will be included in the CC&R's for subdivisions or in recorded written documents for other developments.

6.5 Operational Standards.

- A. The property owners shall maintain the collection point free of vegetation and other obstructions (including vehicles) for APC curb collection for refuse and recycling containers.
- B. The APC will be placed at the collection point on service days and returned to the collection and storage area on non-service days.

6-01.7.0 SPECIAL SERVICES. In developments where proposed solid waste disposal service not specified in these Standards (i.e., developments for the elderly or disabled) prior approval must be obtained from C.O.T. Environmental Services.

6-01.8.0 LIST OF EXHIBITS AND FIGURES.

Exhibit 1 - On-site Service Agreement Form
Figure 1 - 45 Degree Enclosure 'Option' Off Residential Streets
Figure 2 - Structural Design for Enclosure Walls
Figure 3 - Metal Container Enclosure (2 to 8 cubic yards)
Figure 4 - 30 & 45 Degree Enclosures off Alleys
Figure 5 - 30 & 45 Degree Enclosures off PAAL's
Figure 6 - Turnaround for Service Vehicles
Figure 7 - Turning Radii/Turnaround for Service Vehicles
Figure 8 - Specifications for 90 Gallon APC's
Figure 9 - Specifications for 300 Gallon APC's

CITY OF TUCSON
DEVELOPMENT STANDARD NO. 6-01.0
SOLID WASTE DISPOSAL

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CITY OF
TUCSON

Environmental Services

P. O. Box 27210 Tucson, Arizona 85726-7210

Office: (520) 791-3171 Fax: (520) 791-4156

ON-SITE SERVICE AGREEMENT

It is hereby requested that garbage, recycling, and brush & bulky collections be made on my private property located within the city limits.

Property owner (Print)

Resident/Occupant (if different from owner) (Print)

Street address: _____ Zip _____

This letter constitutes authority and permission for City of Tucson Solid Waste Management Department personnel and vehicles to enter upon, on and across my property for the purpose of garbage, recycling, and brush & bulky collection.

It is understood that acceptance of this request and permission does not imply a continuing obligation by the City of Tucson to collect garbage, recycling, and brush & bulky at this location and that such service may be discontinued by the City of Tucson at any time.

It is further understood that should property damage or loss, or personal injury occur in the process of providing services at this location; that the City of Tucson will not be held liable for damages and the property owner and resident (if applicable) **hereby release and hold the City of Tucson harmless from and against any such claims.**

This agreement shall continue in force unless and until terminated by either of the parties hereto, giving notice in writing to the other intention to so terminate. Upon receipt of such notice, this agreement shall thereupon terminate.

AUTHORIZED SIGNATURES:

Accepted this _____ day of _____ 20____

(X)

Concur: Property owner (print)

(signature)

(X)

Concur: Resident/ Occupant (if different than owner) (print)

(signature)

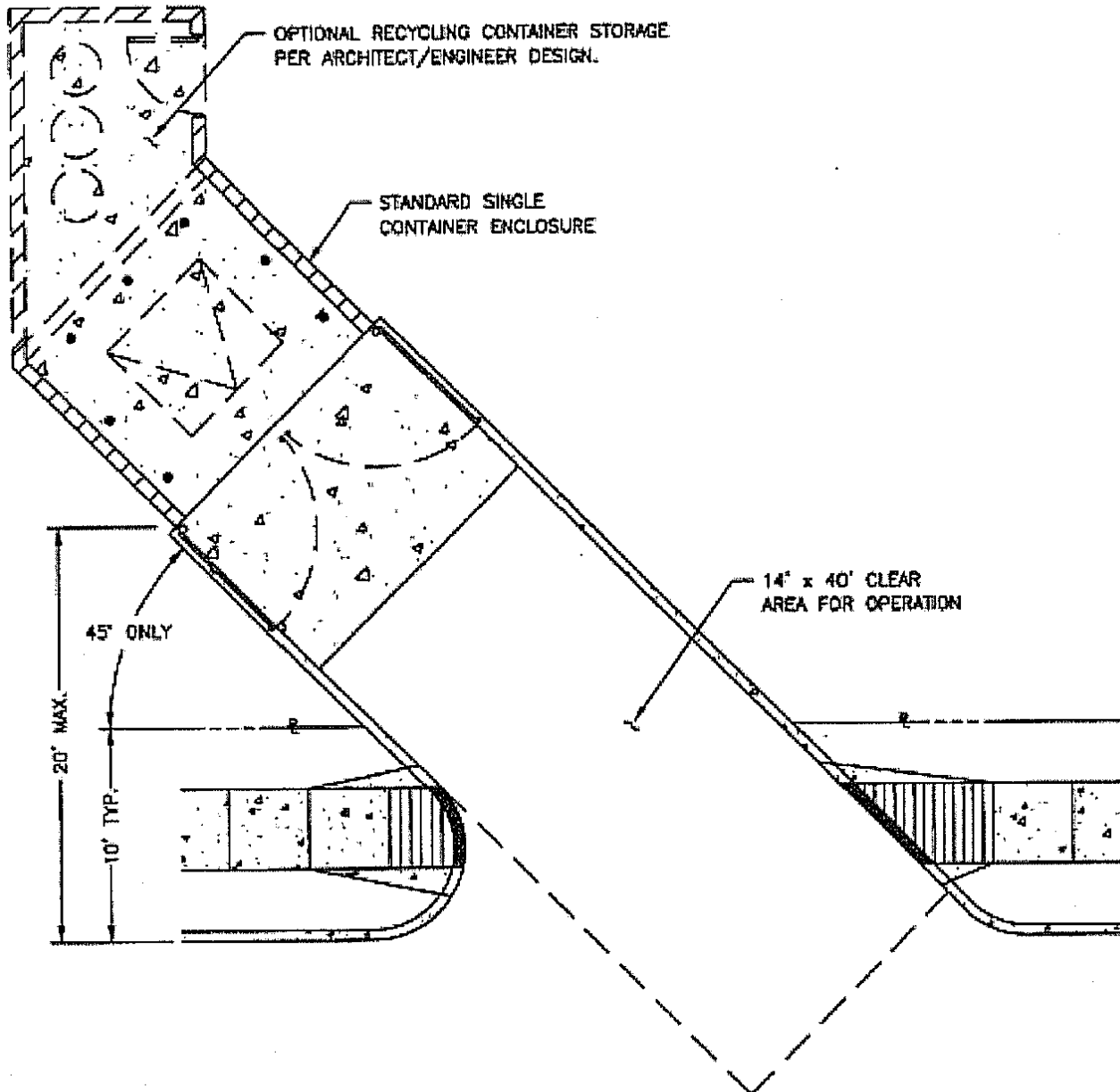
CITY OF TUCSON, a Municipal Corporation

By: _____ (X)

Authorized Environmental Services Representative (print)

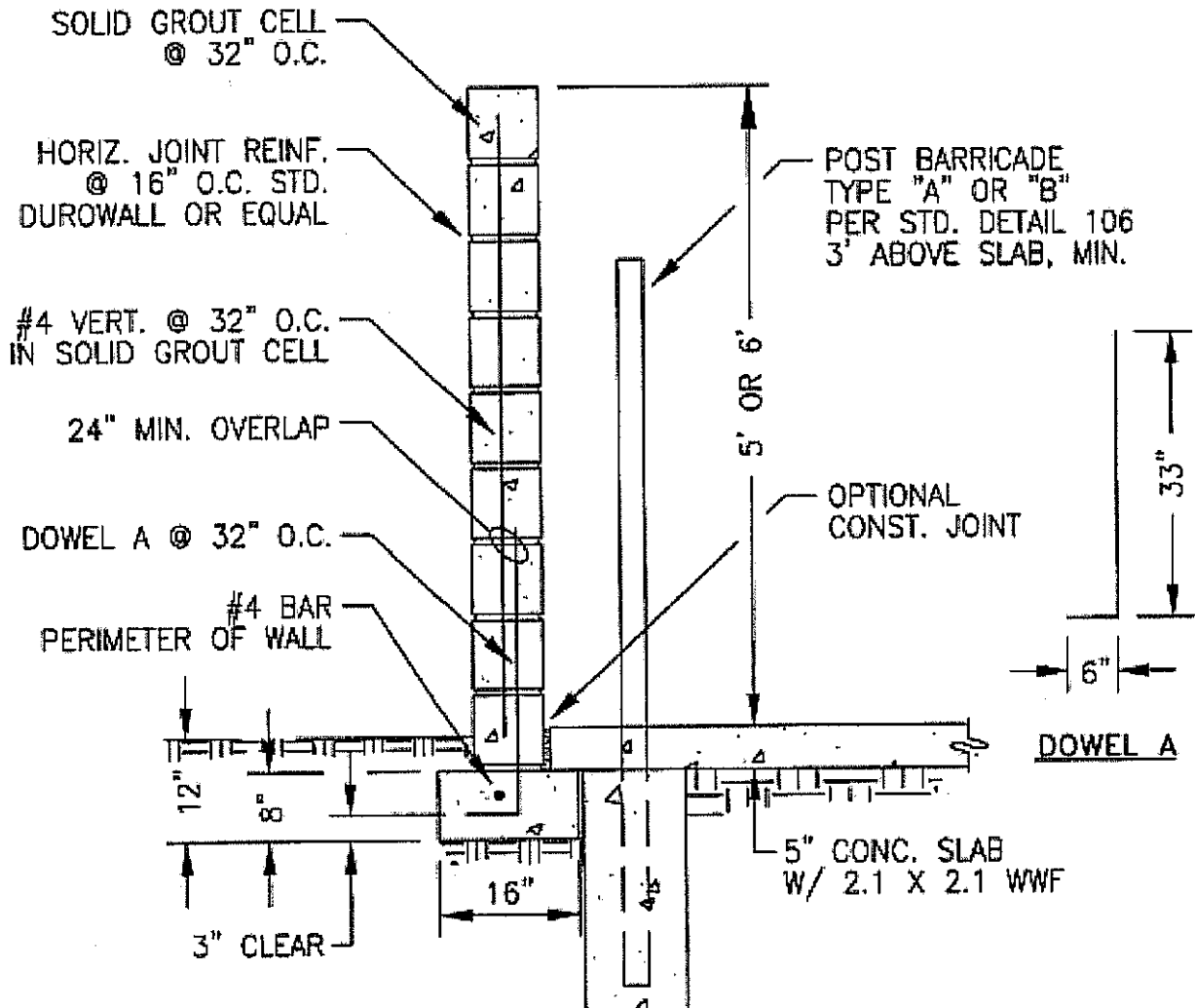
(signature)

SINGLE ENCLOSURE - FOR FRONT LOADING SERVICE



NOTE:

1. OPTIONS OF REFUSE PICKUP OFF NON-ARTERIAL OR COLLECTOR TYPE STREETS TO BE APPROVED PRIOR TO PLAN SUBMITTAL.
2. CURBING AND SIDEWALK PER ARCHITECT/ ENGINEER DESIGN.
3. FOR DESIGN, TRUCK TURNING MOVEMENT FOR SERVICING THE CONTAINER SHOULD NOT PASS OVER THE CENTERLINE OF THE STREET.
4. SERVICE ONLY PROVIDED FOR RESIDENTIAL TYPE STREETS.
5. SERVICE ACCESS MAYBE COMBINED WITH COMPLEX ACCESS DRIVE AT ARCHITECT/ ENGINEER OPTION. PRIOR APPROVAL REQUIRED.



NOTE:

1. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 GRADE N-1, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1500 P.S.I. ALL MASONRY UNITS SHALL BE GROUTED SOLID FULL HEIGHT OF WALL AT VERTICAL STEEL LOCATION.
2. ALL MORTAR SHALL CONFORM TO ASTM C70 TYPE S AND ATTAIN STRENGTH OF 1800 P.S.I.
3. GROUT SHALL CONFORM TO ASTM C476 AND ATTAIN A 28 DAY STRENGTH OF 2000 P.S.I. THE GROUT SHALL BE PLACED IN LIFTS OF MAXIMUM 4'-0". THE CELLS SHALL BE RODDED TO INSURE CELLS ARE FULLY GROUTED.

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4. SECOND POST BARRICADE IS OPTIONAL FOR SIDEWALL PROTECTION. IF ONE POST BARRICADE IS UTILIZED THE DISTANCE FROM THE FRONT SHOULD BE 3'.

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Diagram illustrating the layout of a container enclosure with dimensions and clearances:

- Overall width: 15'
- Overall height: 50'
- Container enclosure dimensions: 14' x 40' (inclined)
- Clearance area: 14' x 40' clear area for operation
- Clearance dimensions: 3' clear area, 3' clear area, 20' ALLEY, 17'-1"
- Radius dimensions: 50' R, 38' R
- Other labels: rear of truck turning radius, container enclosure w/ concrete apron, 30° OFFSET

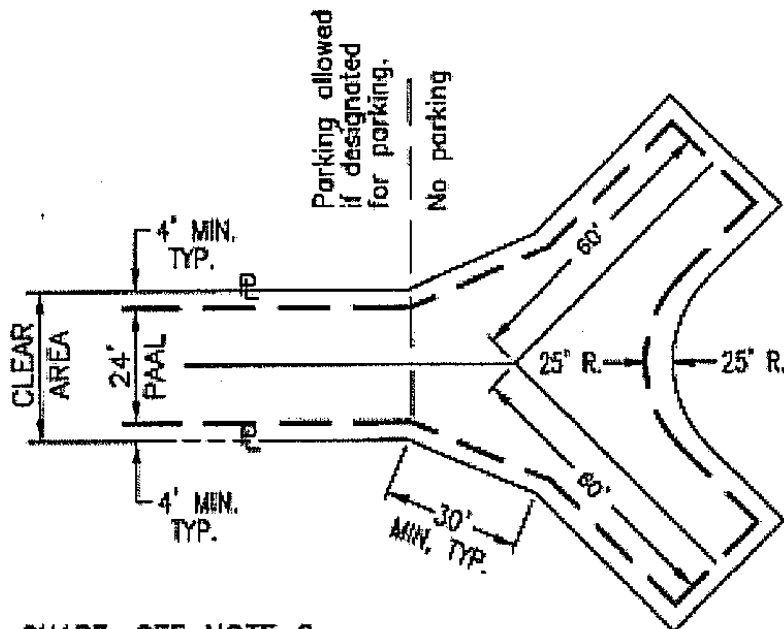
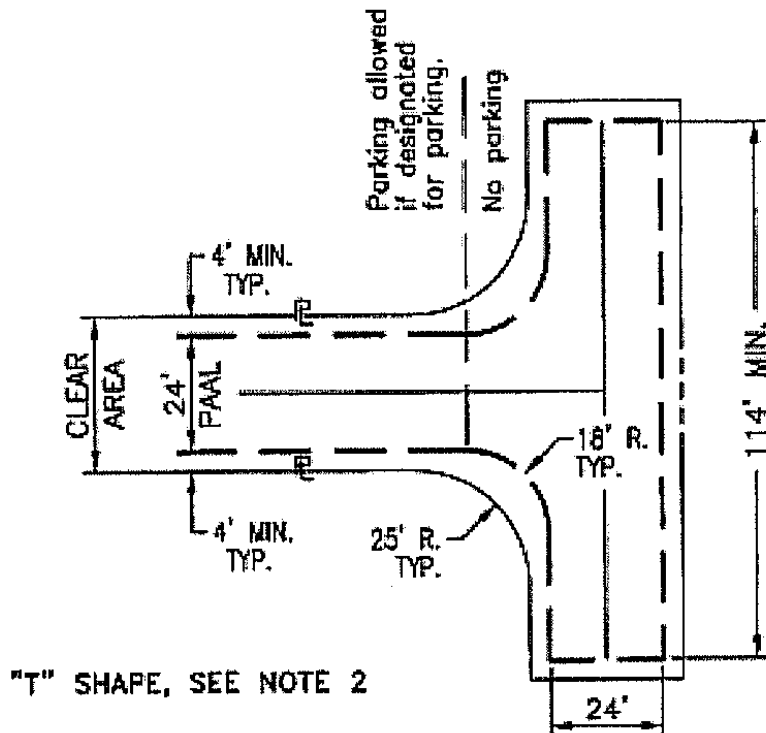


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SCALE: 1"=20'



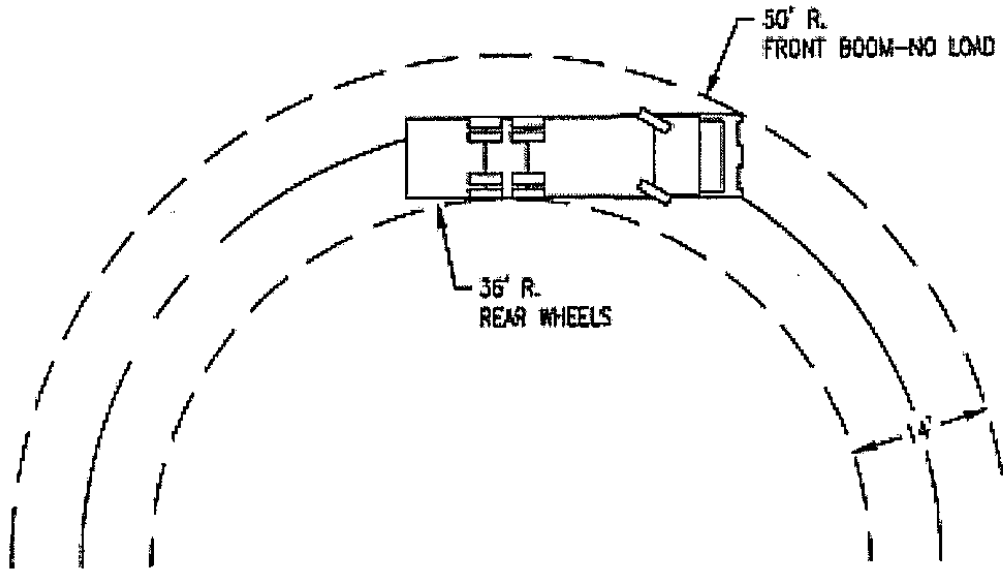
ON-SITE TURNAROUND



"Y" SHAPE, SEE NOTE 2

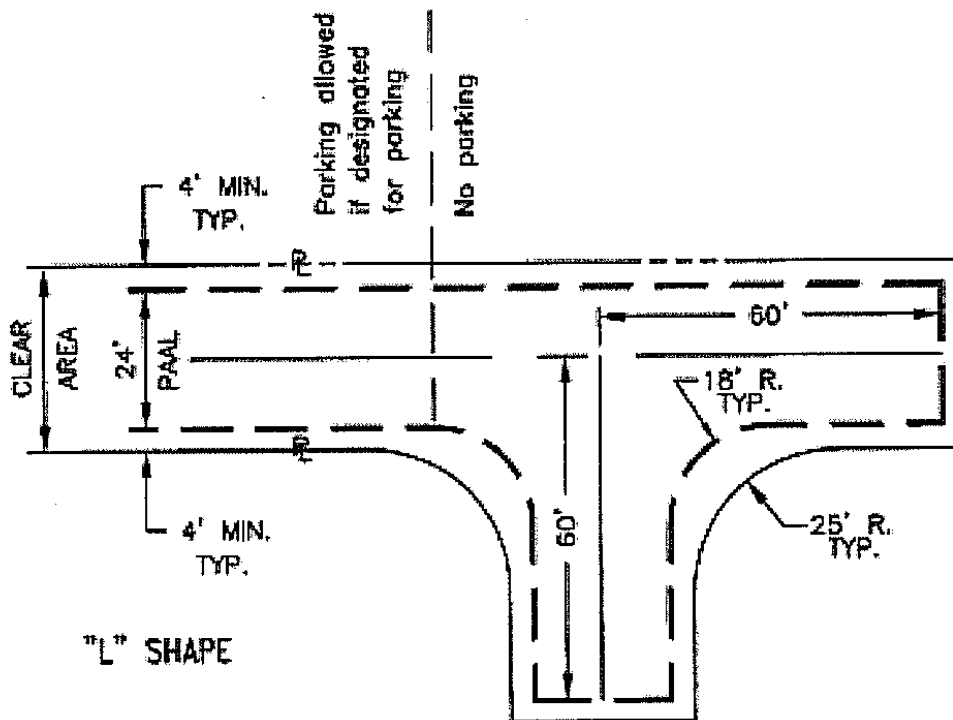
NOTE:

1. VERTICAL CURB SHALL BE REQUIRED IN THE TURNAROUND AREA.
2. IDENTICAL TO STREET DEVELOPMENT STANDARD 3.01.0, FIGURE 23.



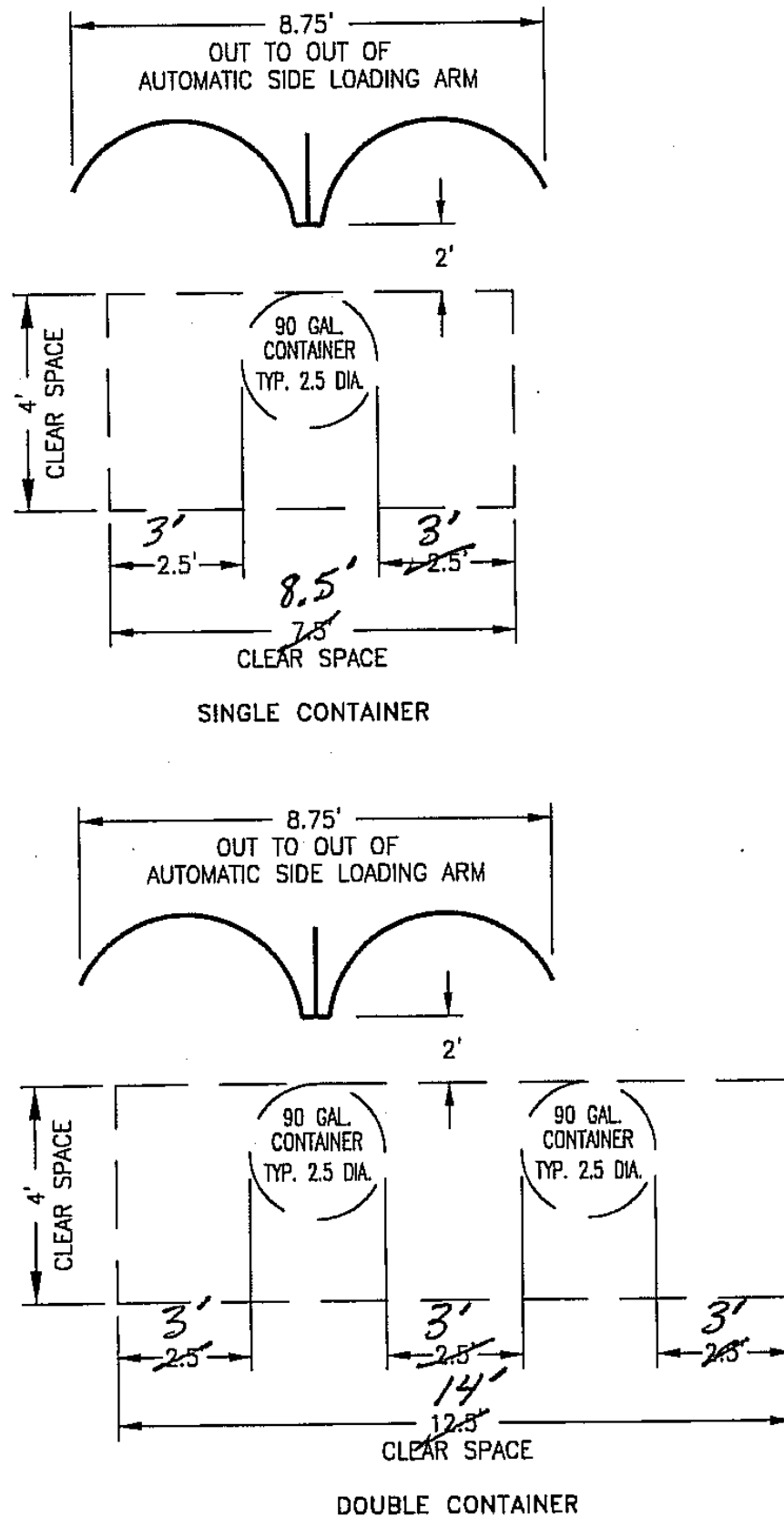
INDUSTRY STANDARD TURNING RADII FOR SERVICE VEHICLES
SCALE: 1"=20'

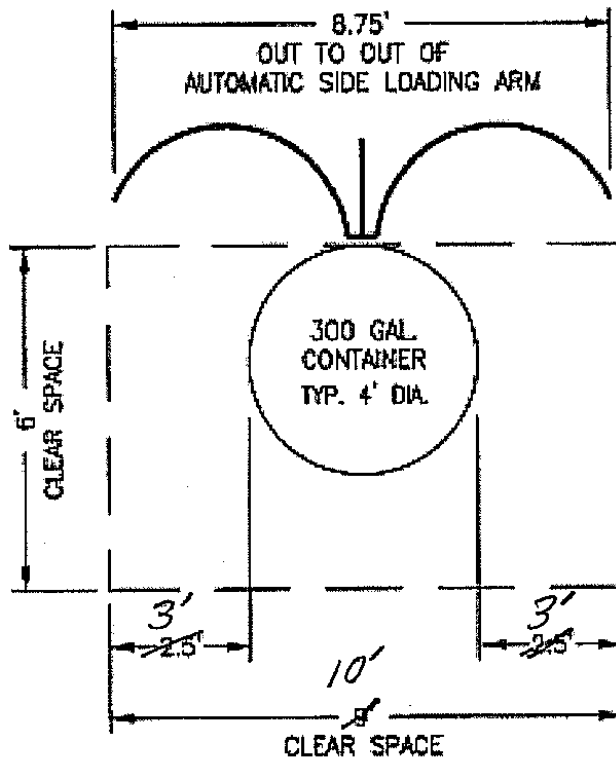
ON-SITE TURNAROUND



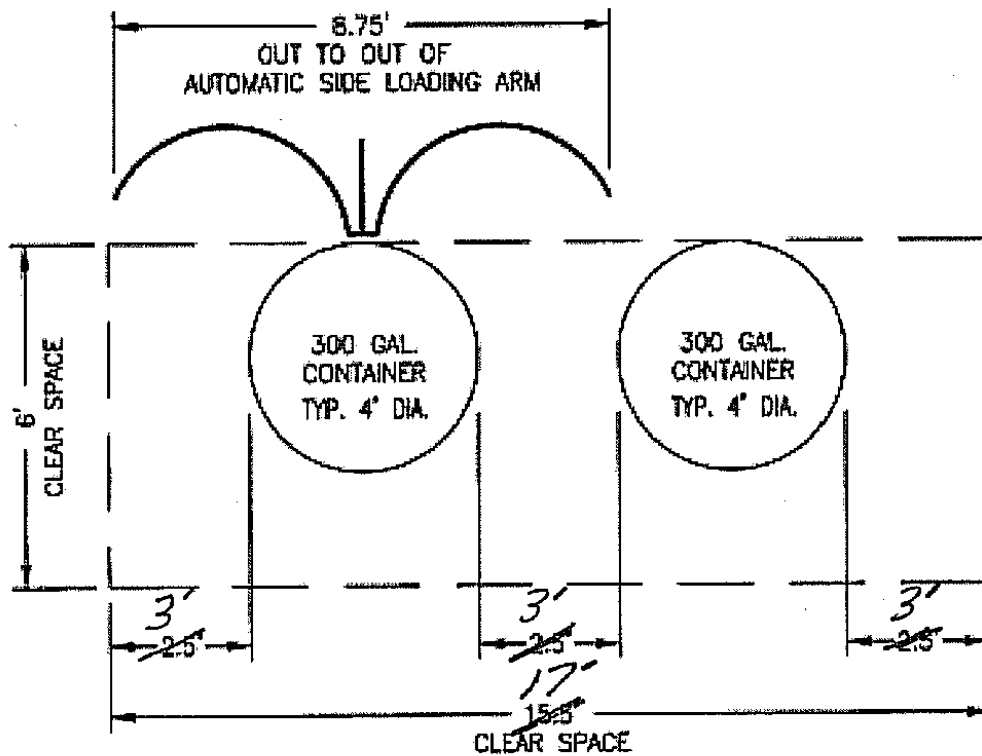
NOTE:

1. VERTICAL CURB SHALL BE REQUIRED IN THE TURNAROUND AREA.





SINGLE CONTAINER



DOUBLE CONTAINER